Sponsored Lunchtime Symposia

ELEKTA SPONSORED SYMPOSIA

Tuesday 18th September 13.00 – 13.30
Location: Ochil Suite

Gamma Knife Radiosurgeryfor Large Cerebral AVMs

Speaker: Andras A. Kemeny

Large AVMs pose a particular challenge of management. There is an active debate on whether it is justified to offer any treatment to large AVMs at all. It is the experience that all interventions for these - microsurgery, endovascular treatment and radiosurgery - are fraught with difficulties, complications and poor outcome.
There has been a trend to use one modality as far as it can be done with perceived safety, then leaving the rest for the other modalities. This has been particularly the case with first-line endovascular interventions, because it is readily available in most neuroscience centres. Increasing data is available suggesting that this is actually reducing the efficacy of later radiosurgery. A collaborative plan before the first intervention is, therefore, the way forward.
This talk will explore the expectations from and try to find the limits of de novo radiosurgery for large AVMs. It will also inform about the latest developments in Gamma Knife Radiosurgery for this difficult group of patients.

BRAINLAB SPONSORED SYMPOSIA

Tuesday 18th September 13.30 – 14.00
Location: Carrick 2 & 3

Towards AVM Best Practice in a Multi-Disciplinary Setting

01:30 – 01:45 Novalis radiosurgery for the management of arteriovenous malformations
Antonio A.F. De Salles, M.D., Ph.D.
Professor of Neurosurgery - UCLA
Department of Neurosurgery and Radiation Oncology

01:45 – 02:00 The role of technology in AVM treatments
Stefan Vilsmeier
President and CEO
Brainlab

Radiosurgical techniques remain a critical component in the armamentarium of treatment options for arteriovenous malformations (AVMs). Successful radiosurgical outcomes critically rely on a clear differentiation of the nidus from the related arteries and the draining veins. An underestimation of the target volume may compromise total obliteration, while an overestimation might result in treatment-related morbidity. Only a detailed analysis of a timed series of digital subtraction angiography (DSA) images allows a confident identification of the nidus. Radiosurgical AVM targets solely delineated on volumetric imaging datasets (such as rotational angiography, CTA or MRA) are significantly different with increasing inter-clinician contouring variability compared to an integrated multimodality approach.
Brainlab software enables clinicians to combine the unique insights gained from planar DSA images with the spatial information gained from volumetric imaging data sets, distinguishing effluent and affluent vessels from the nidus. By simultaneously visualizing a select phase from the 2D DSA series co-registered to 3D vascular information, physicians can identify the correct treatment volume with confidence. Following target definition, the prescribed dose can be planned with maximal homogeneity while ensuring steep dose gradients outside the target volume, which is best achieved using dynamic conformal arcs.
Brainlab ExacTrac 6D robotic alignment facilitates hypo-fractionated radiotherapy employing frameless patient fixation while ensuring sub millimeter-positioning accuracy. Intra-treatment position verification can address any deviations resulting from mechanical inaccuracies or patient movement.